



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,653	06/07/2001	Bernhard Raaf	112740-197	9871
29177	7590	05/03/2006		
BELL, BOYD & LLOYD, LLC P. O. BOX 1135 CHICAGO, IL 60690-1135			EXAMINER MEW, KEVIN D	
			ART UNIT 2616	PAPER NUMBER

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/857,653

Applicant(s)

RAAF, BERNHARD

Examiner

Kevin Mew

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36-65 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Detailed Action

Response to Amendment

1. Applicant's Remarks/Arguments filed on 2/13/2006 regarding claims 36-64 have been considered. Claim 65 has been newly added by applicant and claims 1-35 have been canceled by applicant. Claims 36-65 are currently pending.
2. Acknowledgement is made of arguments made with respect to the 35 U.S.C. 112, first paragraph rejection set forth in the previous Office action. The arguments are persuasive and the 35 U.S.C. 112, first paragraph has been withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 36-46, 56-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art, Grimlund et al. (WO 94/29981) in view of Kronestedt et al. (USP 6,298,095).

Regarding claims 36, 46, Grimlund discloses a method for data transmission in a mobile radio system (cellular communications system comprising communications between base stations and mobile stations, see Fig. 1), the method comprising the steps of:

transmitting first data (**coded information signal is transmitted in an information part of a frame**, see page 8, line 18-22) from a first base station (**BS1**, Fig. 1) to a mobile station

(MS, Fig. 1) using a first transmission method (**coded information signal is received in the information part of a frame and an idle part where no coded information is transmitted**, see page 8, lines 19-22 and Fig. 1);

interrupting the transmission of the first data at specific times by interruption phases (**during the idle part of the compressed mode frame where the mobile station is not listening to the base station to which it is currently linked**, see page 9, lines 3-8) in which the mobile station interrupts at least one of the reception of the first data and the processing of received first data (**during the idle part the coded information signal is not transmitted**, see page 8, lines 21-22);

switching, during interruption phases (**during the idle part**), the mobile station to reception of characteristic data packets (**receiving other carrier frequencies**) which are transmitted by a second base station (**carrier frequencies are transmitted by other base stations**, see page 9, lines 3-4, and 21) using a second transmission method (**the mobile station is performing measurements on other carrier frequencies during the idle part of the compressed mode**, see page 9, lines 3-4); and

Grimlund does not explicitly show switching, during interruption phases, the mobile station to reception of the data packets to be detected and transmitted by the second base station using the second transmission method, wherein the reception of data packets to be detected and the characteristic data packets occurs parallel.

However, Kronestedt discloses the downlink synchronization channel SCH data bits and frequency correction channel FCCH data bits are mapped on a single time slot (**occurs parallel**, col. 1, lines 44-67, col. 2, lines 1-6). Therefore, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to modify the mobile radio system of Grimlund with the teaching of Kronestedt in communicating the SCH and FCCH data bits on the same time slot (occurs parallel) such that the mobile radio system and method of Grimlund will switch, during the idle part, the mobile station to reception of the synchronization channel SCH data bits to be detected and transmitted by the second base station using the second transmission method, wherein reception of the synchronization channel SCH data bits to be detected and the carrier frequency of the second base station occurs parallel.

The motivation to do so is to comply with the GSM specification that the downlink broadcast control channels SCH and FCCH data bits are transmitted on the same single time slot from the second base station to a mobile station because FCCH bits are used to allow a mobile station to accurately tune to a base station and SCH data bits are used to synchronize a mobile station with the TDMA structure of a particular cell.

Regarding claim 37, Grimlund discloses a method for data transmission in a mobile radio system as claimed in claim 36, the method further comprising the step of:

using knowledge about a frame structure of the data packets (**using the duty cycle of a frame**) transmitted by the second base station in order to reduce a maximum effective total duration of the interruption phases (**to determine how much time should be allocated as the maximum duration for the idle part when performing measurements on carrier frequencies**, see page 10, lines 3-13).

Regarding claim 38, Grimlund discloses a method for data transmission in a mobile radio system as claimed in claim 36, the method further comprising the step of:

using, if the transmission conditions are good, a shorter maximum effective total duration of the interruption phases for secure detection of a data packet to be detected than would be necessary if the mobile station is switched only to receive the characteristic data packets (**only a short period of time is needed in the idle part when the mobile station is to perform measurements on other frequencies**, see page 10, lines 4-6).

Regarding claim 39, Grimlund discloses a method for data transmission in a mobile radio system as claimed in claim 36, the method further comprising the step of:

using the knowledge about a relative position of the characteristic data packets transmitted by the second base station and of the data packets to be detected (**using the position of the idle part that is being used for measuring carrier frequencies and synchronization**) in order to reduce a maximum effective total duration of the interruption phases (**to determine the duty cycle and hence the maximum duration that is allocated for the idle part**, see page 10, lines 3-18).

Regarding claim 40, Grimlund discloses a method for data transmission in a mobile radio system as claimed in claim 36, the method further comprising the step of:

transmitting, after receiving at least one of characteristic data packet and a data packet to be detected, from the mobile station to the first base station, information which influences insertion of interruption phases (**duty cycle information is transmitted from a mobile station**,

see page 11, lines 17-26; note that duty cycle information indicates the information part of a frame and hence influences the idle part of the frame).

Regarding claim 41, Grimlund discloses a method for data transmission in a mobile radio system as claimed in claim 40, the method further comprising the step of:

transmitting, after receiving a data packet to be detected (**after synchronization**), from the mobile station to the first base station, information which results in no more interruption phases being inserted (**normal mode, in which duty cycle is 1 or no idle part is used, is entered after the synchronization data is determined**, see page 10, lines 9-11).

Regarding claim 42, Grimlund discloses a method for data transmission in a mobile radio system as claimed in claim 40, the method further comprising the step of:

transmitting, after receiving a characteristic data packet (**after deciding on the carrier frequency of a new base station**), information from the mobile station to the first base station, which results in another interruption phase (**comprised mode is entered**) receiving the data packet to be detected (**synchronization is then determined**) being inserted after a predetermined time interval between the characteristic data packets and the data packets to be detected (**compressed mode is entered to determine synchronization after other carrier frequencies are measured**, see page 9, lines 19-26).

Regarding claim 43, Grimlund discloses a method for data transmission in a mobile radio system as claimed in claim 36, the method further comprising the step of:

switching, after receiving at least one of a characteristic data packet and a data packet to be detected from the second base station, the mobile station to receive at least one of another characteristic data packet and a data packet to be detected from at least one third base station **(mobile station performs measurements on other carrier frequencies transmitted by other base stations, see page 9, lines 3-8 and 19-26); and**

transmitting, after receiving at least one of a characteristic data packet and the data packet to be detected from the at least one third base station **(after receiving carrier frequencies from different base stations)**, information from the mobile station to the first base station in order to at least influence one of the insertion of the interruption phases **(the mobile station is asking the old base station to drop the old link with this old base station)** and transmit information via at least one of the second **(and mobile station is then establishing a new link between the mobile station and the new base station after the handover, see page 9, lines 3-8 and 19-26)** and third base stations.

Regarding claim 44, Grimlund discloses a method for data transmission in a mobile radio system as claimed in claim 36, the method further comprising the step of:

storing and evaluating in a memory information transmitted via data packets from the mobile station to the second base station in a predetermined time period **(evaluation of carrier frequencies is performed at the mobile station during the idle part of a frame, see page 9, lines 3-6).**

Regarding claim 45, Grimlund discloses a method for data transmission in a mobile radio system as claimed in claim 43, the method further comprising the step of:

transmitting information for influencing insertion of the interruption phases (**duty cycle**) and information about the second and the third base stations via a same message (**carrier frequencies of base stations**, see Fig. 3; note that mode controller 33 controls duty cycle and carrier frequencies to be transmitted to the Info Decoder 38).

Regarding claim 56, Grimlund discloses a base station (**BS1**, see Fig. 1) in a mobile radio system, comprising:

a transmitter (see page 11, lines 18-20 and Fig. 3) for transmitting first data (coded information signal is transmitted in an information part of a frame, see page 8, line 18-22) to a mobile station (**MS**, Fig. 1) using a first transmission method (**coded information signal is received in the information part of a frame and an idle part where no coded information is transmitted**, see page 8, lines 19-22 and Fig. 1); and

an inserter (**spreading and framing means**, see page 11, lines 18-20 and Fig. 3) for inserting interruption phases (**for spreading and framing data such that a first part of a frame contains coded information signal and an idle part contains no coded information signal**, see page 19, lines 1-9), at least during specific transmission phases in which the mobile station interrupts the reception of at least one of the first data (**during the idle part**) and the processing of received first data and in which the mobile station is switched to the reception to characteristic data packets and are transmitted by a second base station (**mobile station performs measurements on the carrier frequencies of other base stations during the idle**

part of the compressed mode, see page 9, lines 2-6, 19-30), wherein an effective total duration, which is required for secure detection in good transmission conditions, of the interruption phases is shorter than the effective total duration of the interruption phases when the mobile station is switched only to reception of at least one of characteristic data packets and data packets to be detected (**only a short period of time is needed in the idle part when the mobile station is to perform measurements on other frequencies**, see page 10, lines 4-6).

Grimlund does not explicitly show the simultaneous reception of characteristic data packets and data packets to be detected.

However, Kronestedt discloses the downlink synchronization channel SCH data bits and frequency correction channel FCCH data bits are mapped on a single time slot (**occurs parallel**, col. 1, lines 44-67, col. 2, lines 1-6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile radio system of Grimlund with the teaching of Kronestedt in communicating the SCH and FCCH data bits on the same time slot (occurs parallel) such that the mobile radio system and method of Grimlund will switch, during the idle part, the mobile station to reception of the synchronization channel SCH data bits to be detected and transmitted by the second base station using the second transmission method, wherein reception of the synchronization channel SCH data bits to be detected and the carrier frequency of the second base station occurs parallel.

The motivation to do so is to comply with the GSM specification that the downlink broadcast control channels SCH and FCCH data bits are transmitted on the same single time slot from the second base station to a mobile station because FCCH bits are used to allow a mobile

station to accurately tune to a base station and SCH data bits are used to synchronize a mobile station with the TDMA structure of a particular cell.

Regarding claim 57, Grimlund discloses a base station in a mobile radio system as claimed in claim 56, further comprising:

a device (**mode controller**, see page 11, lines 18-30 and Fig. 3) for using knowledge about a frame structure of the data packets (**using the duty cycle of a frame**) transmitted by the second base station in order to reduce a maximum effective total duration of the interruption phases (**to determine how much time should be allocated as the maximum duration for the idle part when performing measurements on carrier frequencies**, see page 10, lines 3-13).

Regarding claim 58, Grimlund discloses a base station in a mobile radio system as claimed in claim 56, further comprising:

a device (**mode controller**, see page 11, lines 18-30 and Fig. 3) using the knowledge about a relative position of the characteristic data packets transmitted by the second base station and of the data packets to be detected (**using the position of the idle part that is being used for measuring carrier frequencies and synchronization**), and is used to reduce a maximum effective total duration of the interruption phases (**to determine the duty cycle and hence the maximum duration that is allocated for the idle part**, see page 10, lines 3-18).

Regarding claim 59, Grimlund discloses a base station in a mobile radio system as claimed in claim 56, further comprising:

a receiver (**spreading and framing means**, see Fig. 3) for receiving information (frames) which influences the insertion of interruption phases (**the information part and idle part of a frame**, see page 19, lines 1-11); and

a device (**mode controller**, see Fig. 3) for influencing the insertion of interruption phases (**mode controller controls duty cycle**, see page 12, lines 10-13) as a function of the information which influences the insertion of interruption phases (**based on the information part and idle part of the frame**).

Regarding claim 60, Grimlund discloses a base station (**BS1**, see Fig. 1) in a mobile radio system as claimed in claim 56, further comprising:

a transmitter for transmitting data from and to a mobile station (see page 11, lines 17-20 and Fig. 3);

an inserter (**spreading and framing means**) for inserting interruption phases at least during specific transmission phases (**for spreading and framing data such that a first part of a frame contains coded information signal and an idle part contains no coded information signal**, see page 19, lines 1-9);

a receiver for receiving information (**RF receiver for receiving carrier frequencies**, see Fig. 3) which influences the insertion of interruption phases; and

a device for influencing the insertion of interruption phases (**mode controller for controlling duty cycle**, see page 12, lines 10-13) as a function of a reception result (**carrier frequencies**) at the mobile station.

Regarding claim 61, Grimlund discloses a base station in a mobile radio system as claimed in claim 56, further comprising:

a device (**mode controller**, see Fig. 3) for receiving and processing information which results in more than one interruption phases being inserted (**controls the duty cycle and hence the idle part of a frame**, see page 19, lines 6-9).

Regarding claim 62, Grimlund discloses a base station in a mobile radio system as claimed in claim 56, further comprising:

a device (**mode controller**, see Fig. 3) for receiving and processing information which results in no more interruption phases being inserted after receiving a subsequent data packet to be detected (**normal mode transmission, in which duty cycle is 1 or no idle part is used, is entered after synchronization is complete**, see page 9, lines 19-26 and page 10, lines 9-11).

Regarding claim 63, Grimlund discloses a base station in a mobile radio system as claimed in claim 56, further comprising:

a device (**mode controller**, see Fig. 3) for receiving and processing information (**controls duty cycle**, see page 12, lines 10-13) which results in another interruption phase for receiving data packets to be detected (**synchronization is determined during the compressed mode**) being inserted (**compressed mode is entered**) after a predetermined time interval which is between the characteristic data packets and the data packets to be detected (**compressed mode is entered to determine synchronization after other carrier frequencies are measured**, see page 9, lines 19-26).

Regarding claim 64, Grimlund discloses a base station in a mobile radio system as claimed in claim 56, further comprising:

a device (**mode controller**, see Fig. 3) for receiving and processing at least one of information for influencing the insertion of the interruption phases (**controls duty cycle**, see page 12, lines 10-13) and information about at least one further base station.

Regarding claim 65, Grimlund discloses a method for data transmission in a mobile radio system (**cellular communications system comprising communications between base stations and mobile stations**, see Fig. 1), the method comprising the steps of:

transmitting first data (**coded information signal is transmitted in an information part of a frame**, see page 8, line 18-22) from a first base station (**BS1**, Fig. 1) to a mobile station (**MS**, Fig. 1) using a first transmission method (**coded information signal is received in the information part of a frame and an idle part where no coded information is transmitted**, see page 8, lines 19-22 and Fig. 1);

interrupting the transmission of the first data at specific times by interruption phases (**during the idle part of the compressed mode frame where the mobile station is not listening to the base station to which it is currently linked**, see page 9, lines 3-8) in which the mobile station interrupts at least one of the reception of the first data and the processing of received first data (**during the idle part the coded information signal is not transmitted**, see page 8, lines 21-22);

switching, during interruption phases (**during the idle part**), the mobile station to reception of frequency correction packets (**receiving other carrier frequencies**) transmitted by a second base station (**carrier frequencies are transmitted by other base stations**, see page 9, lines 3-4, and 21) using a second transmission method (**the mobile station is performing measurements on other carrier frequencies during the idle part of the compressed mode**, see page 9, lines 3-4); and

Grimlund does not explicitly show switching, during interruption phases, the mobile station to reception of a synchronization packet transmitted by the second base station using the second transmission method, wherein the reception of synchronization burst and the frequency correction burst packets occurs parallel.

However, Kronestedt discloses the downlink synchronization channel SCH data bits and frequency correction channel FCCH data bits are mapped on a single time slot (**occurs parallel**, col. 1, lines 44-67, col. 2, lines 1-6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile radio system of Grimlund with the teaching of Kronestedt in communicating the SCH and FCCH data bits on the same time slot (occurs parallel) such that the mobile radio system and method of Grimlund will switch, during the idle part, the mobile station to reception of the synchronization channel SCH data bits to be detected and transmitted by the second base station using the second transmission method, wherein reception of the synchronization channel SCH data bits to be detected and the carrier frequency of the second base station occurs parallel.

The motivation to do so is to comply with the GSM specification that the downlink broadcast control channels SCH and FCCH data bits are transmitted on the same single time slot

from the second base station to a mobile station because FCCH bits are used to allow a mobile station to accurately tune to a base station and SCH data bits are used to synchronize a mobile station with the TDMA structure of a particular cell.

4. Claims 47-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grimlund and Kronestedt, and in further view of Bruckert et al. (USP 5,812,542).

Regarding claim 47, the combined method of Grimlund and Kronestedt discloses a mobile station in a mobile radio system, comprising:

a first receiver for receiving first data which are transmitted by a first base station (**RF receiver receiving incoming radio signal**, see page 12, lines 1-4 and Fig. 3) using a first transmission method (**coded information signal is received in the information part of a frame and an idle part where no coded information is transmitted**, see page 8, lines 19-22 and Fig. 1);

an inserter (**spreading and framing means**, see Fig. 3) for inserting pauses at least during specific reception phases in which at least one of reception of first data (**for spreading and framing data such that a first part of a frame contains coded information signal**, see page 19, lines 1-9) and processing of received first data is interrupted; and

a switch (**mode controller**, see page 12, lines 1-13) for switching the reception of characteristic data packets (**the mobile station is performing measurements on other carrier frequencies broadcasted by other base stations during the idle part of the compressed mode**, see page 9, lines 3-4), and transmitted by a second base station during the specific reception phases in which at least one of the reception of the first data and the processing of the

received first data is interrupted (**during the idle part of the compressed mode frame where the mobile station is not listening to the base station to which it is currently linked**, see page 9, lines 3-8).

Grimlund does not explicitly show the simultaneous reception of characteristic data packets and data packets to be detected.

However, Kronestedt discloses the downlink synchronization channel SCH data bits and frequency correction channel FCCH data bits are mapped on a single time slot (**occurs parallel**, col. 1, lines 44-67, col. 2, lines 1-6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile radio system of Grimlund with the teaching of Kronestedt in communicating the SCH and FCCH data bits on the same time slot (occurs parallel) such that the mobile radio system and method of Grimlund will switch, during the idle part, the mobile station to reception of the synchronization channel SCH data bits to be detected and transmitted by the second base station using the second transmission method, wherein reception of the synchronization channel SCH data bits to be detected and the carrier frequency of the second base station occurs parallel.

The motivation to do so is to comply with the GSM specification that the downlink broadcast control channels SCH and FCCH data bits are transmitted on the same single time slot from the second base station to a mobile station because FCCH bits are used to allow a mobile station to accurately tune to a base station and SCH data bits are used to synchronize a mobile station with the TDMA structure of a particular cell.

The combined method of Grimlund and Kronestedt does not explicitly show a second receiver for receiving data packets which are transmitted by a second base station using a second transmission method.

However, Bruckert discloses that in a CDMA system a mobile station comprises a second receiver that receives via a second antenna a second representation of a desired RF signal (see col. 6, lines 58-63 and Fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile station of Grimlund such that the mobile station of the Grimlund comprises a second receiver such that it receives a second representation of a desired RF signal from the same base station such as the second receiver in a mobile station taught by Bruckert. The motivation to do so is to use the second receiver to provide space diversity operation for the mobile station in order to improve the reception performance of the mobile station under multipath fading conditions.

Regarding claim 48, the combined method of Grimlund, Kronestedt and Bruckert discloses all the aspects of the claimed invention set forth in the rejection of claim 47 above, except fail to explicitly show a mobile station in a mobile radio system as claimed in claim 47, further comprising:

a further switch for switching to reception of data packets which are characteristic, are to be detected and are transmitted by a third base station.

However, Grimlund discloses a mobile station is able to connect to more than one base stations simultaneously by establishing a macro-diversity mode on two carrier frequencies.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile station of Grimlund such that the mobile station of Grimlund comprises a further switch to receive the carrier frequency and synchronization data of another base station. The motivation to do so is to allow simultaneous communication between the mobile station with both the old base stations and the new base station to make sure a new link of the mobile station with the new base station is established first before breaking the link with the old base station.

Regarding claim 49, Grimlund discloses a mobile station in a mobile radio system as claimed in claim 47, further comprising:

an evaluator (**measurement/handover algorithm**) for evaluating information contained in at least one of the characteristic data packets (**controls the carrier frequencies measured by the mobile station**, see page 9, lines 2-6, and page 11, lines 26-30, page 12, lines 10-13) and in the data packets which are to be detected; and

a transmitter (see element 32, Fig. 3) for transmitting information (**duty cycle of a frame from the mode controller**) to the first base station (see Fig. 3), which influences the insertion of interruption phases (**duty cycle influences the determination of the idle part**, see page 10, lines 3-13) as a function of information which is contained in at least one of the characteristic data packets (**carrier frequency**, see page 11, lines 24-25) and the data packets to be detected.

Regarding claim 50, Grimlund discloses a mobile station in a mobile radio system as claimed in claim 47, further comprising:

an evaluator (**measurement/handover algorithm**) for evaluating information contained in at least one of the characteristic data packets (**controls the carrier frequencies measured by the mobile station**, see page 9, lines 2-6, and page 11, lines 26-30, page 12, lines 10-13) and in the data packets which are to be detected; and

a switch for switching off specific elements in the mobile station in the interruption phases once sufficient information has been determined about at least one further base station (**handover is completed by dropping the old links once synchronization and carrier frequency information are determined**, see page 9, lines 19-30).

Regarding claim 51, Grimlund discloses a mobile station in a mobile radio system as claimed in claim 47, further comprising:

a transmitter for transmitting information to the first base station which results in no more interruption phases being inserted (**normal mode, in which duty cycle is 1 or no idle part is used, is entered after the synchronization data is determined**, see page 10, lines 9-11 and Fig. 3).

Regarding claim 52, Grimlund discloses a mobile station in a mobile station system as claimed in claim 47, further comprising:

a transmitter for transmitting information to the first base station which results in no more interruption phases being inserted after receiving a subsequent data packet to be detected (**normal mode transmission, in which duty cycle is 1 or no idle part is used, is entered after synchronization is complete**, see page 9, lines 19-26 and page 10, lines 9-11).

Regarding claim 53, Grimlund discloses a mobile station in a mobile radio system as claimed in claim 47, further comprising:

a transmitter for transmitting information to the first base station which results in another interruption phase for receiving the data packet to be detected (**synchronization is determined during the compressed mode**) being inserted (**compressed mode is entered**) after a predetermined time interval which is between the characteristic data packets and the data packets to be detected (**compressed mode is entered to determine synchronization after other carrier frequencies are measured**, see page 9, lines 19-26).

Regarding claim 54, Grimlund discloses a mobile station in a mobile radio system as claimed in claim 49, further comprising:

a switch (**mode controller**, see page 12, lines 1-13) for switching to reception of at least one of a characteristic data packet (**carrier frequency**) and a data packet to be detected from at least one third base station after receiving at least one of a characteristic data packet (**carrier frequency**) and a data packet to be detected from a second base station (**the mobile station is performing measurements on other carrier frequencies broadcasted by other base stations during the idle part of the compressed mode**, see page 9, lines 3-4); and

a transmitter for transmitting information to the first base station in order to at least one of influence the insertion of the interruption phases (**information to be transmitted to the old base station to drop the link between mobile station and the old base station**, see page 9, lines 19-30) and transmit information about second and third base stations after receiving at least

one of a characteristic data packet (**establish new link with the new base station after deciding on the carrier frequency transmitted by the new base station**, see page 9, lines 19-30) and a data packet to be detected from at least one third base station.

Regarding claim 55, Grimlund discloses a mobile station in a mobile radio system as claimed in claim 47, further comprising:

a device (**mode controller**, see Fig. 3) for storing and evaluating data packets received by a second base station in a predetermined time period (**evaluation of carrier frequencies is performed at the mode controller of the mobile station during the idle part of a frame**, see page 9, lines 3-6).

Response to Arguments

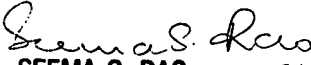
5. Applicant's arguments filed on 2/13/2006 have been fully considered but are moot in view of a new ground of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Mew whose telephone number is 571-272-3141. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


SEEMA S. RAO 5/11/06
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Kevin Mew 
Work Group 2616